

IN THE CLAIMS:

1. (Currently amended) Apparatus for reading from and/or writing to optical recording media, comprising:

means of disk type identification including a mirror-signal forming unit and a threshold value forming unit for forming at least one of a plurality of possible threshold values;

an optical scanning means;

a focus regulating circuit, ~~where the disk type identification means has a mirror signal forming unit;~~

a counter; and

an evaluation unit; .

~~the disk type identification means furthermore has a threshold value forming unit for forming one of a plurality of possible threshold values.~~

2. (previously amended) Apparatus according to Claim 1, wherein inputs of the mirror signal-forming unit are connected to an output of the scanning means and to the threshold value-forming unit, in that the counter is connected to an output of the mirror signal-forming unit and to an input of the evaluation unit.

3. (previously amended) Apparatus according to Claim 1, wherein the apparatus has a layer thickness identification means for determining the protective layer which covers an information layer of the recording medium, or a spacing identification means for determining the spacing between two information layers.

4. (previously amended) Method for identifying the type of an optical recording medium, having the following method steps:

aa) focusing onto an information layer of the recording medium

bb) setting of one of a plurality of possible threshold values for the generation of a mirror signal, which threshold value is unsuitable for generating the mirror signal at least for one type of recording medium

cc) counting of transitions of the mirror signal

dd) determining the type of the recording medium using the count.

5. (Amended) Method according to Claim 4, where, in step dd), the recording medium is determined as being associated with an nth type if the count lies in an nth range of values, where n is an integer.

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6. (Currently amended) A method for identifying the type of an optical recording medium, having the following method steps:

aa) focusing onto an information layer of the recording medium;

bb) setting of one of a plurality of possible threshold values for the generation of a mirror signal, which threshold value is unsuitable for generating the mirror signal at least for one type of recording medium;

cc) counting of transitions of the mirror signal; and

dd) determining the type of the recording medium using the count;

~~Method according to Claim 4~~, wherein the scanning beam is moved across a region of the recording medium which is larger than a region which corresponds to the maximum eccentricity that occurs.

7. (Currently amended) A method for identifying the type of an optical recording medium, having the following method steps:

aa) focusing onto an information layer of the recording medium;

bb) setting of one of a plurality of possible threshold values for the generation of a mirror signal, which threshold value is unsuitable for generating the mirror signal at least for one type of recording medium;

cc) counting of transitions of the mirror signal; and

dd) determining the type of the recording medium using the count;

~~Method according to Claim 4~~, wherein steps bb) to cc) are performed a number of times, a different threshold value being set in each case in step bb).

8. (Currently amended) A method for identifying the type of an optical recording medium, having the following method steps:

- B2
- aa) focusing onto an information layer of the recording medium;
 - bb) setting of one of a plurality of possible threshold values for the generation of a mirror signal, which threshold value is unsuitable for generating the mirror signal at least for one type of recording medium;
 - cc) counting of transitions of the mirror signal; and
 - dd) determining the type of the recording medium using the count;

~~Method according to Claim 4~~, wherein after the type has been determined, a check is made to see whether focusing onto a further information layer is possible.

9. (Currently amended) A method for identifying the type of an optical recording medium, having the following method steps:

- aa) focusing onto an information layer of the recording medium;
- bb) setting of one of a plurality of possible threshold values for the generation of a mirror signal, which threshold value is unsuitable for generating the mirror signal at least for one type of recording medium;
- cc) counting of transitions of the mirror signal; and
- dd) determining the type of the recording medium using the count;

~~Method according to Claim 4~~, wherein the method is ~~first of all~~ utilized for identifying the type of the information layer onto which focusing is effected, in that the settings of the apparatus are adapted to the layer type that has been determined, in that information is read from the information layer and the type of recording medium is determined from the information read.

10. (previously amended) Method according to Claim 4, where a check is made to see whether a square-wave signal can be formed from a data signal and a threshold value and the type of recording medium is determined from this information, characterized in that the square-wave signal is a mirror signal formed from an envelope signal of the data signal.

11. (previously amended) Method for identifying the type of an optical recording medium by means of a parameter mirror signal in an apparatus for reading from and/or writing to optical recording media, comprising the following method steps:

- B2
- v) setting of a counter value to a start value
 - w) setting of a threshold value to a specified threshold value
 - a) formation of an envelope signal from a data signal
 - b) filtering of the envelope signal taking account of a cut-off frequency
 - c) comparison of the filtered envelope signal with the threshold value
 - d) setting of the parameter mirror signal to a first value if the filtered envelope signal lies above the threshold value, and to a second value if it lies below the threshold value
 - e) determination of the frequency of the mirror signal
 - g) branching to step a) if a specified first time interval is not exceeded
 - l) storage of the value of the frequency if the first time interval is exceeded
 - m) incrementing of the counter value by a specified value
 - n) branching to step w) if the counter value does not exceed a specified end value
 - p) determination of the type of recording medium from the frequencies established.

12. (previously amended) Method according to Claim 4, wherein information tracks of the recording medium are traversed simultaneously.